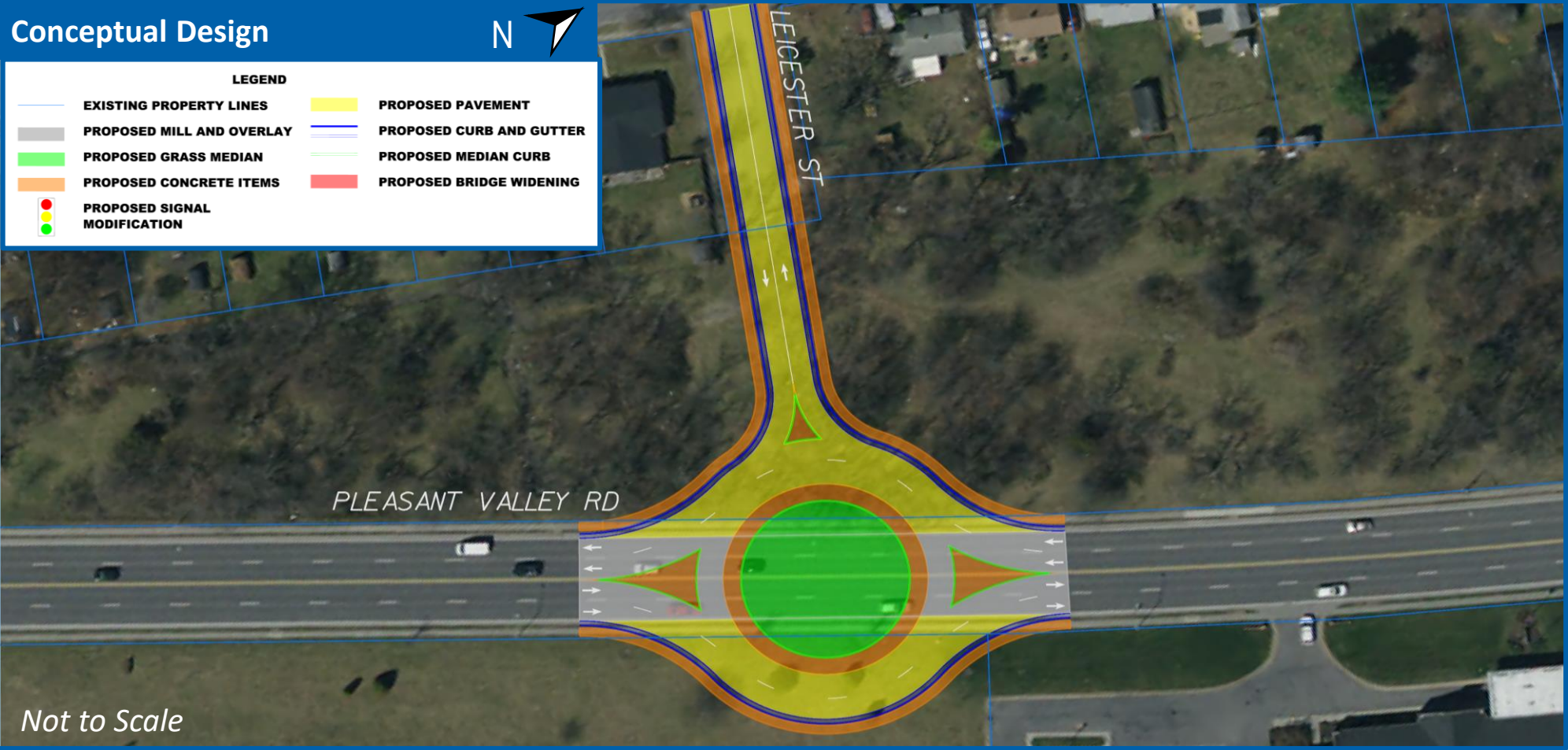


Improvement #3: Leicester Street and Pleasant Valley Road

Install Two-Lane Roundabout Between Hollingsworth Drive and Cork Street



Operations and Safety Improvements

The following recommendations are projected to improve operations and/or safety along Pleasant Valley Road. This concept may be incorporated with access to Jim Barnett Park planned in the 2011 City of Winchester Comprehensive Plan.

Leicester Street and Pleasant Valley Road

- Improvement 3: Install Two-Lane Roundabout Between Hollingsworth Drive and Cork Street
 - Improves access to adjacent residential community
 - Reduces vehicle speeding along Pleasant Valley Road
 - Enhances pedestrian crossing safety and access
 - Five-year EPDO crashes reduced by 10

Safety Results

Crash modification factors (CMFs) were chosen to project the reduction in all severity crashes weighted to equivalent property damage only (EPDO) crashes.

2014-2019* EPDO	CMF	EPDO Reduction
66	Alignment Reconstruction (0.85)	10

* 2019 VDOT crash data was available through July 30, 2019

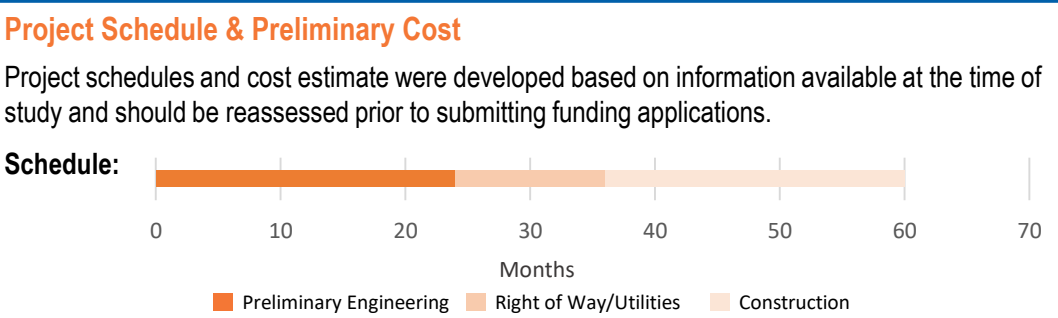
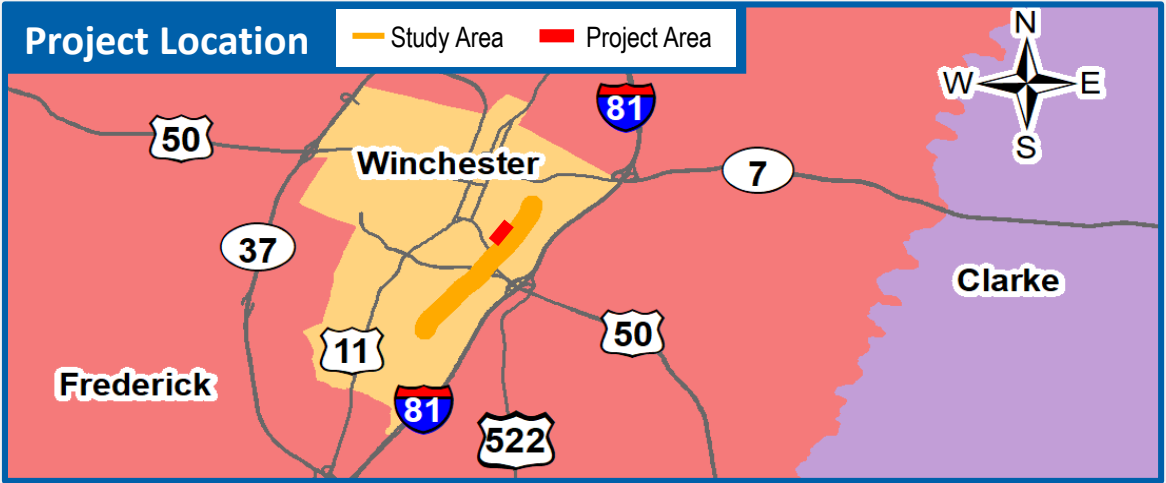
Existing Observed Speeds

Speed data was recorded between Hollingsworth Drive and Cork Street on Wednesday, December 18 to Monday, December 23, 2019. The observed data indicates a speeding concern, specifically in the southbound direction.

Direction of Travel	Posted Speed Limit (mph)	Average Speed (mph)	85 th Percentile Speed (mph)
Southbound	40	44	49
Northbound	40	41	46

Typical Speeds in a Roundabout*: 15-20 MPH

*Source: [Federal Highway Administration](#)



Cost:

Phase	Cost Estimate (2020 Dollars)
Preliminary Engineering	\$800,000
ROW and Utility Relocation	\$80,000
Construction	\$3,990,000
Total Cost	\$4,870,000

Traffic Operations Results

95th Percentile Queue Length

The following predict the 95th percentile queue lengths for Build conditions considering redistributed neighborhood volumes.

Movement or Approach	No-Build Queue (ft)	Build Queue (ft)	% Reduction
Improvement 3:			
Pleasant Valley Road– NB	---	62	---
Pleasant Valley Road– SB	---	74	---

Improvement 2: Roundabout